CONTENTS OF VOLUME 16

Volume 16, No. 1, 1984	
ACSM 1984 Annual Meeting Information	vii
Editorial-Charles M. Tipton	viii
Directions—1984	
Overuse injuries in athletes: a perspective William D. Stanish	1
Exercise, functional aerobic capacity, and aging—another viewpoint Robert A. Bruce	В
Dyspnea in exercise Norman L. Jones	
Physiology of fluid and electrolyte responses during inactivity: water immersion and bed rest John E. Greenleaf	
Biomechanics and neuromuscular performance Paavo V. Komi	
Brief Review	
Metabolic bases of excess post-exercise oxygen consumption: a review Glenn A. Gaesser and George A. Brooks	29
Original Investigations	
Physical activity and osteoporosis in post-menopausal women Nancy Oyster, Max Morton, and Sheri Linnell	44
Exercise and temperature effects on human sperm production and testosterone levels Timothy R. McConnell and Wayne E. Sinning	
Sleep loss and the sympathoadrenal response to exercise Bruce J. Martin and Hsiun-ing Chen	
Anatomical factors associated with predicting plantar fasciitis in long-distance runners Barbara L. Warren	
Stabilometry in functional instability of the ankle and its value in predicting injury Hans Tropp, Jan Ekstrand, and Jan Gillquist	
Comparative physiological profiles among young and middle-aged female distance runners S. Jill Upton, R. Donald Hagan, Barbara Lease, Joel Rosentswieg, Larry R. Gettman, and John J. Duncan	
Physiological characteristics of high-ability prepubescent wrestlers Stanley P. Sady, Wade H. Thomson, Kris Berg, and Mark Savage	
Validity of anthropometric equations for the estimation of body density in adolescent athletes William G. Thorland, Glen O. Johnson, Gerald D. Tharp, Thomas G. Fagot, and Richard W. Hammer.	
Anaerobic metabolism of the respiratory muscles during exercise Bruce J. Martin, Hsiun-ing Chen, and Margaret A. Kolka	82
"Second wind" during inspiratory loading Steven M. Scharf, Hylton Bark, Dov Heimer, Arnon Cohen, and Peter T. Macklem	
Methodological Studies	
Methodological factors and the prediction of body fat in female athletes T.G. Lohman, M.L. Pollock, M.H. Slaughter, L.J. Brandon, and R.A. Boileau	92
Evaluation of a portable ultrasonoscope in assessing the body composition of college-age women Patricia A. Volz and Steven M. Ostrove	
Volume 16, No. 3, 1984	
Letter to the Editor-In-Chief	vi
Brief Review	
The effect of exercise training on human hypertension Douglas R. Seals and James M. Hagberg	207
Exchange Review	
Current concepts in the role of steroids in the treatment of sprains and strains Jay S. Cox	216
Original Investigations	
Effect of carbohydrate feedings on muscle glycogen utilization and exercise performance	210

	The effect of long-distance running upon appendicular bone mineral content Judith Ann Williams, John Wagner, Richard Wasnich, and Lance Heilbrun	223
	Temporomandibular joint repositioning and exercise performance: a double-blind study William D. McArdle, Leonard B. Goldstein, Fred C. Last, Robert Spina, Steven Lichtman, James E. Meyer, and Al I. Berger	
1	Body segment contributions to height achieved during the flight of a springboard dive Doris I. Miller and Carolyn F. Munro	
	Thyroidal changes associated with endurance training in women Thomas W. Boyden, Richard W. Pamenter, Thomas C. Rotkis, Philip Stanforth, and Jack H. Wilmore	
	Intravascular volume and protein responses to running exercise R.J. Edwards and M.H. Harrison	. 247
	Blood volume and hemoglobin concentration as determinants of maximal aerobic power Inge-Lis Kanstrup and Björn Ekblom	. 256
	Effects of phosphate loading on 2,3-diphosphoglycerate and maximal oxygen uptake Robert Cade, Michael Conte, Christian Zauner, Donald Mars, John Peterson, Denis Lunne, Norman Hommen, and David Packer	. 263
	Effects of high- and low-intensity exercise training on aerobic capacity and blood lipids Glenn A. Gaesser and Robert G. Rich	. 269
	Lipid peroxides, prostacyclin, and thromboxane A₂ in runners during acute exercise Lasse Viinikka, Juhani Vuori, and Olavi Ylikorkala	. 275
	A longitudinal assessment of anaerobic threshold and distance-running performance Kiyoji Tanaka, Yoshiyuki Matsuura, Akira Matsuzaka, Kohji Hirakoba, Shuzo Kumagai, Sub O. Sun, and Katsumi Asano	. 278
	Caloric cost of performing the Perrier Parcourse Fitness Circuit **Robert Hayes Sleamaker**	. 283
	The physique of sportsmen: a study using factor analysis A.W.S. Watson	
	Exaggerated systolic blood pressure response to exercise in a water polo team Ronald A. Dlin, Raffy Dotan, Omri Inbar, Arie Rotstein, Ira Jacobs, and Jan Karlsson	
Mod	deling Study	
	Peripheral limitations to exercise Jerry Franklin Green and Alan P. Jackman	. 299
Met	hodological Studies	
	Validity of CO _z -rebreathing cardiac output during rest and exercise in young adults **Robert H. Beekman, Victor Katch, Charles Marks, and Albert P. Rocchini	. 306
	Body composition and expiratory reserve volume in female gymnasts and runners H.L. Barlett, M.J. Mance, and E.R. Buskirk	311
	Arm x-ray assessment of percent body fat in men and women Frank I. Katch and Albert R. Behnke	316
Info	rmation for Authors	ix
Poli	cy Statement Regarding the Use of Human Subjects and Informed Consent	xii
	ume 16, No. 4, 1984	
EXC	change Review	
	Current concepts in the diagnosis and treatment of musculotendinous injuries Bruce E. Baker	323
Brie	ef Review	
	Possible contribution of skeletal muscle buffers to enhanced anerobic performance: a brief review W.S. Parkhouse and D.C. McKenzie	328
Ori	ginal Investigations	
	Death during recreational exercise in the State of Rhode Island Michael Rogosta, Jeannie Crabtree, William Q. Sturner, and Paul D. Thompson	339
	Bone mineral content and menstrual regularity in female runners Sheri L. Linnell, Joel M. Stager, Peter W. Blue, Nancy Oyster, and David Robertshaw	343
	Specificity of arm training on aerobic power during swimming and running Thomas J. Gergley, William D. McArdle, Pam DeJesus, Michael M. Toner, Sheldon Jacobowitz, and Robert J. Spina	
	The maximum physiological responses during incremental wheelchair and arm cranking exercise in male paraplegics	000
	G.C. Gass and E.M. Camp	355

	Physiological responses to prolonged upper-body exercise Nancy A. Pimental, Michael N. Sawka, Darren S. Billings, and Laurie A. Trad	360
	Haptoglobin and serum enzymatic response to maximal exercise in relation to physical fitness	
	Diane L. Spitler, W. Carter Alexander, G. Wyckliffe Hoffler, Donald F. Doerr, and Paul Buchanan Influence of intense endurance training on aerobic power of competitive distance runners	366
	Kevin A. Mikesell and Gary A. Dudley	371
	Kinematic factors influencing performance and injury risk in the bench press exercise Nels Madsen and Thomas McLaughlin	376
	Kinetic sources of lower-limb angular displacement in the recovery phase of sprinting Arthur E. Chapman, Robert Lonergan, and Graham E. Caldwell	
	The influence of somatotype on anthropometric prediction of body composition in young women Ronald Bulbulian	389
	Body composition prediction in university football players Joe F. Smith and Edward R. Mansfield	
	Effect of exercise on oxygen consumption, heart rate, and the electrocardiogram of pigs Frank M. Faraci, Steven C. Olsen, and Howard H. Erickson	406
1	Methodological Studies	
	Body composition by hydrostatic weighing at total lung capacity and residual volume Benjamin F. Timson and Jerry L. Coffman	411
	Optimum design of diving snorkels A.M. Baz	415
١	Statistical Study	
	Regression analysis in physiological research: some comments on the problem of repeated measurements	
	Allan Donner and David A. Cunningham	422
	Information for Authors	
	Policy Statement Regarding the Use of Human Subjects and Informed Consent	Xii
	Volume 16, No. 5, 1984	
	Letter to the Editor-In-Chief	vii
	J.B. Wolffe Memorial Lecture	
	Advances in the understanding of knee ligament injury, repair, and rehabilitation Frank R. Noyes, Cary S. Keller, Edward S. Grood, and David L. Butler	427
	Exchange Review Current concepts in the diagnosis and treatment of shoulder instability in athletes	
	Bertram Zarins and Carter R. Rowe	444
	Exercise and human neuromuscular diseases: a symposium overview	
	Steven F. Lewis	449
	Clinical disorders of muscle energy metabolism Robert B. Layzer and Steven F. Lewis	451
	Pathophysiology of exercise performance in muscle disease Ronald G. Haller and Steven F. Lewis	
	Effect of training on the exercise responses of neuromuscular disease patients Julaine M. Florence and James M. Hagberg	
	Neuromuscular diseases as models of cardiovascular regulation during exercise Steven F. Lewis, Ronald G. Haller, and C. Gunnar Blomqvist	
	Original Investigations	
	Physiological characteristics of classical ballet Peter G. Schantz and Per-Olof Astrand	472
	Some circulatory responses to exercise at different times of day T. Reilly, G. Robinson, and D.S. Minors	477
	Effects of high-intensity strength training on cardiovascular function B.F. Hurley, D.R. Seals, A.A. Ehsani, LJ. Cartier, G.P. Dalsky, J.M. Hagberg, and J.O. Holloszy.	483
	Sensitivity of maximal aerobic power to training is genotype-dependent D. Prud'homme, C. Bouchard, C. Leblanc, F. Landry, and E. Fontaine	
	Effects of acute cold exposure on submaximal endurance performance John F. Patton and James A. Vogel	
	The inertial and geometrical properties of helmets Glen O. Njus, Y. King Liu, and Thomas A. Nye	

Brief Review Response, regulation, and actions of vasopressin during exercise: a review Charles E. Wade Methodological Study Validation of noninvasive maximal cardiac output measurement Position Stand on Prevention of Thermal Injuries During Distance Runningix Information for Authorsxv Policy Statement Regarding the Use of Human Subjects and Informed Consentxviii Volume 16, No. 6, 1984 J.B. Wolffe Memorial Lecture Activity-induced fast to slow transitions in mammalian muscle Mechanisms of exercise-induced delayed onset muscular soreness: a brief review **Original Investigations** Effect of strength training on glucose tolerance and post-glucose insulin response Factors related to adherence to an exercise program for healthy adults Delayed menarche in swimmers in relation to age at onset of training and athletic performance Endurance exercise and pregnancy outcome Vo_{ames} response in separate and combined arm and leg air-braked ergometer exercise Comparison of 6-min "all-out" and incremental exercise tests in elite oarsmen Submaximal exercise quantified as percent of normoxic and hyperoxic maximum oxygen uptakes William C. Byrnes, Patricia M. Mihevic, Patty S. Freedson, and Steven M. Horvath 572 Symposium Preface to Body Composition Assessment: a Reevaluation of our Past and a Look Toward the Future Research progress in the field of body composition Sports science and body composition analysis: emphasis on cell and muscle mass A reaction to the manuscripts of Roche and Buskirk Research progress in validation of laboratory methods of assessing body composition A reaction to laboratory methodology Research progress in validation of clinical methods of assessing body composition Comments on clinical methods of assessing body composition Research design and analysis of data procedures for predicting body density

 Kirk J. Cureton
 621

 Contents of Volume 16
 ix

 Author Index for Volume 16
 xiii

 Key Word Index for Volume 16
 xiv

 Guest Reviewers for 1984
 xvii

 Information for Authors
 xviii

A reaction to the manuscript of Jackson

